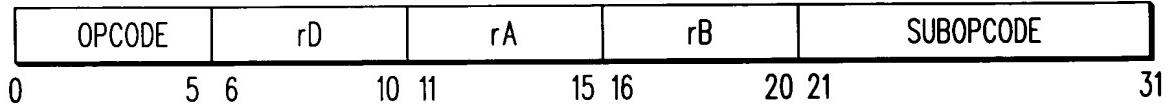


FIG. 1

□

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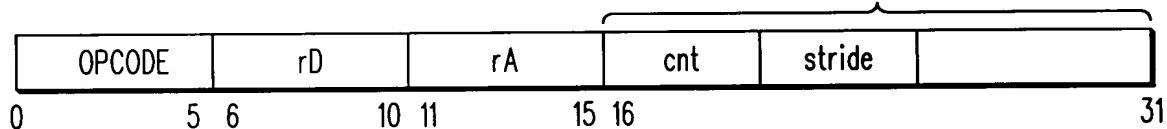
l vex.[s/u].[ms].[ds] rD, rA, rB



*FIG. 2*

l vex.[s/u].[ms].[ds] rD, rA, cnt, stride

SUBOPCODE



*FIG. 3*

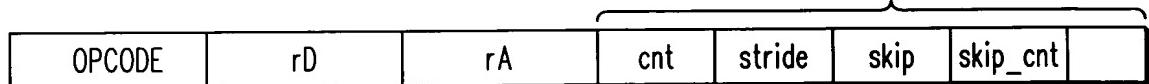
lmvex.[s/u].[ms].[ds] rD, rA, rB



*FIG. 4*

lmvex.[s/u].[ms].[ds] rD, rA, cnt, stride, skip, skip\_cnt

SUBOPCODE



*FIG. 5*

□

□

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lmvex2.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	rcnt	stride	skip
-----	-----	------	--------	------

***FIG. 6***

lstrmvex.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	rcnt	stride	skip	skip_cnt
-----	-----	------	--------	------	----------

***FIG. 7***

stvex.[s/u].[ms].[ss].[h/l] rS, rA, rB

OPCODE	rS	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	stride
-----	-----	--------

***FIG. 8***

└

└

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stmvex.[s/u].[ms].[ss].[h/l] rS, rA, rB

OPCODE	rS	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	stride	skip	skip_cnt
-----	-----	--------	------	----------

## *FIG. 9*

stmvex2.[s/u].[ms].[ss].[h/l] rS, rA, rB

OPCODE	rS	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	rcnt	stride	skip
-----	-----	------	--------	------

## *FIG. 10*

ststrmvex.[s/u].[ms].[ss].[h/l] rS, rA, rB

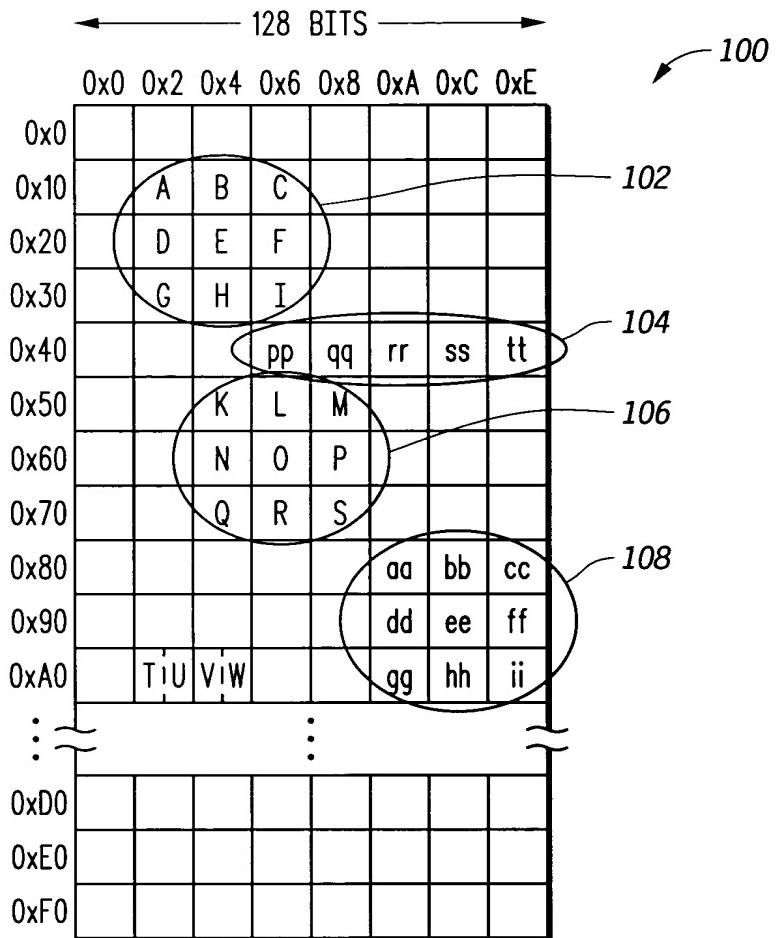
OPCODE	rS	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB:	cnt	rcnt	stride	skip	skip_cnt
-----	-----	------	--------	------	----------

## *FIG. 11*

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*FIG. 12*

← 64 BITS →

A	B	C	0	R0
K	L	M	0	R1
A+K	B+L	C+M	0	R2
				R3
				R4
				R5
⋮	⋮	⋮	⋮	⋮
				R31

*FIG. 13*

← 64 BITS →

D	E	F	0	R0
N	O	P	0	R1
D+N	E+O	F+P	0	R2
G	H	I	0	R3
Q	R	S	0	R4
G+Q	H+R	I+S	0	R5
⋮	⋮	⋮	⋮	⋮
				R31

*FIG. 14*

└

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← 64 BITS →

A	B	C	D	R0
E	F	G	H	R1
I	0	0	0	R2
				R3
				R4
				R5
~~	⋮	~~	⋮	⋮
				R31

← 64 BITS →

A	B	C	0	R0
D	E	F	0	R1
G	H	I	0	R2
				R3
→iT	→iU	→iV	0	R4
				R5
~~	⋮	~~	⋮	⋮
				R31

*FIG. 15*

*FIG. 16*

← 64 BITS →

				R0
pp	qq	rr	ss	R1
tt	0	0	0	R2
				R3
pp	rr	tt	0	R4
				R5
~~	⋮	~~	⋮	⋮
				R31

*FIG. 17*

└

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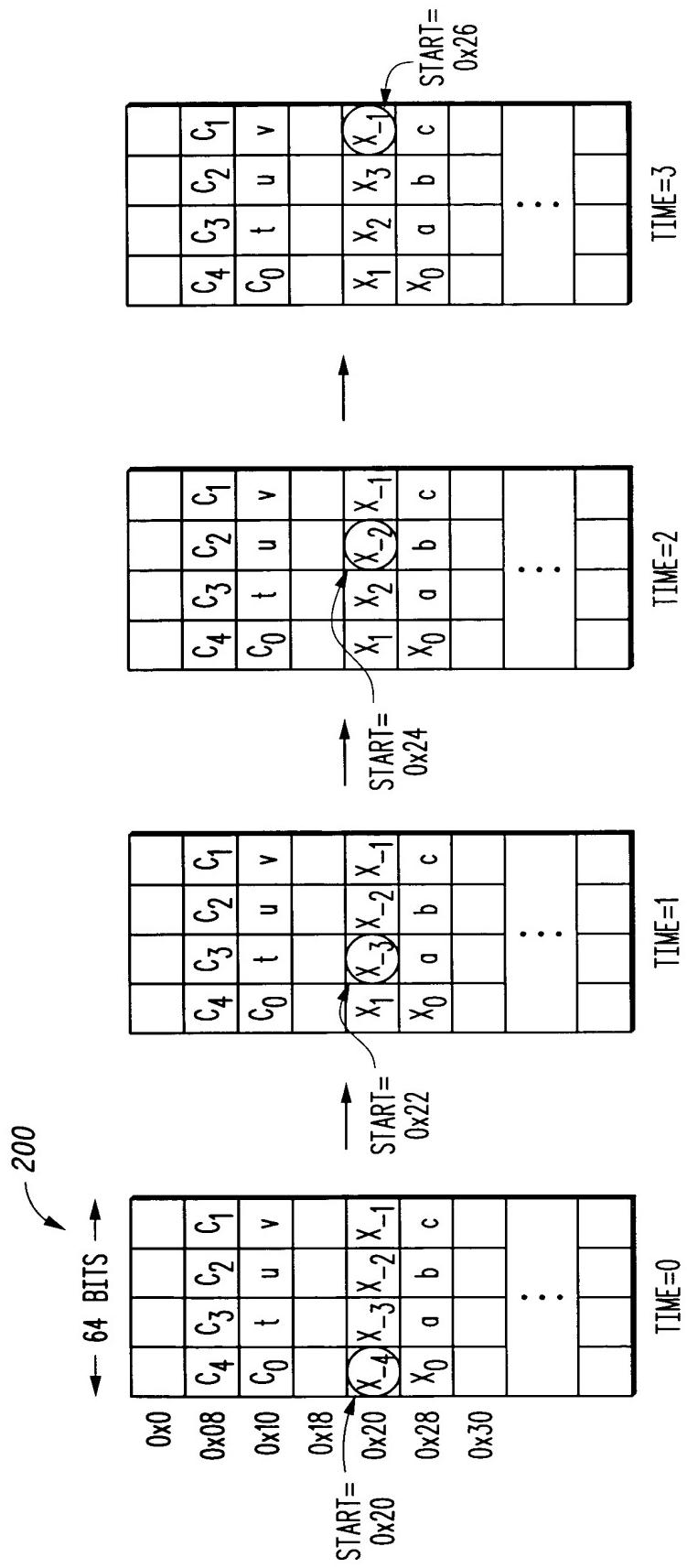


FIG. 18

L

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64 BITS			
0x08		R1	
0x20		R2	
⋮			
$C_4$	$C_3$	$C_2$	$C_1$
$C_0$	0	0	$C_0$
$X_{-4}$	$X_{-3}$	$X_{-2}$	$X_{-1}$
$X_0$	0	0	0
$C_4 \cdot X_{-4} + C_3 \cdot X_{-3} + C_2 \cdot X_{-2} + C_1 \cdot X_{-1}$			
$C_0 \cdot X_0 + 0 \cdot 0 + 0 \cdot 0 + 0 \cdot 0$			

*FIG. 19*

64 BITS			
0x22		R2	
⋮			
$C_4$	$C_3$	$C_2$	$C_1$
$C_0$	0	0	$C_0$
$X_{-3}$	$X_{-2}$	$X_{-1}$	$X_0$
$X_1$	0	0	0
$C_4 \cdot X_{-3} + C_3 \cdot X_{-2} + C_2 \cdot X_{-1} + C_1 \cdot X_0$			
$C_0 \cdot X_1 + 0 \cdot 0 + 0 \cdot 0 + 0 \cdot 0$			

*FIG. 20*

64 BITS			
0x24		R2	
⋮			
$C_4$	$C_3$	$C_2$	$C_1$
$C_0$	0	0	$C_0$
$X_{-2}$	$X_{-1}$	$X_0$	$X_1$
$X_2$	0	0	0
$C_4 \cdot X_{-2} + C_3 \cdot X_{-1} + C_2 \cdot X_0 + C_1 \cdot X_1$			
$C_0 \cdot X_2 + 0 \cdot 0 + 0 \cdot 0 + 0 \cdot 0$			

*FIG. 21*

64 BITS			
0x26		R2	
⋮			
$C_4$	$C_3$	$C_2$	$C_1$
$C_0$	0	0	$C_0$
$X_{-1}$	$X_0$	$X_1$	$X_2$
$X_3$	0	0	0
$C_4 \cdot X_{-1} + C_3 \cdot X_0 + C_2 \cdot X_1 + C_1 \cdot X_2$			
$C_0 \cdot X_3 + 0 \cdot 0 + 0 \cdot 0 + 0 \cdot 0$			

*FIG. 22*

└

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← 64 BITS →

A	B	C	0
K	N	Q	0
0x12			
0x54			

R1  
R2  
R3  
R4  
R5

← 64 BITS →

D	E	F	0
K	N	Q	0
0x12			
0x54			
⋮			
A·K+B·N+C·Q			

R1  
R2  
R3  
R4  
R5  
⋮  
R10  
R11  
R12

*FIG. 23*

*FIG. 24*

← 64 BITS →

G	H	I	0
K	N	Q	0
0x12			
0x54			
⋮			
A·K+B·N+C·Q			
D·K+E·N+F·Q			

R1  
R2  
R3  
R4  
R5  
⋮  
R10  
R11  
R12

← 64 BITS →

G	H	I	0
L	O	R	0
0x12			
0x54			
⋮			
A·K+B·N+C·Q			
D·K+E·N+F·Q			
G·K+H·N+I·Q			

R1  
R2  
R3  
R4  
R5  
⋮  
R10  
R11  
R12

*FIG. 25*

*FIG. 26*

└

□

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lmvex\_skip\_once.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: 

cnt	stride	skip	skip_cnt
-----	--------	------	----------

## *FIG. 27*

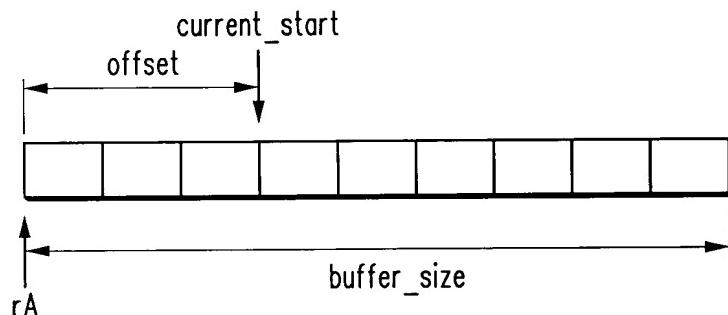
lmvex\_cb.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: 

buffer_size	offset
-------------	--------

## *FIG. 28*



## *FIG. 29*

lstrmvex\_cb.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: 

buffer_size	offset
-------------	--------

## *FIG. 30*

└

□

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lmvex\_fft.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: radix

## *FIG. 31*

stmvex\_fft.[s/u].[ms].[ss] rS, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: radix

## *FIG. 32*

lmstrmvex\_fft.[s/u].[ms].[ds] rD, rA, rB

OPCODE	rD	rA	rB	SUBOPCODE
--------	----	----	----	-----------

rB: radix

## *FIG. 33*

└

□

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0x0	0x0	0x0	0x0	0x0	0x0	0x0	0xE
0x0							
0x10			$x_0$	$x_1$	$x_2$	$x_3$	$x_4$
0x20	$x_5$	$x_6$	$x_7$				
0x30							
0x40		$y_0$	$y_4$	$y_6$	$y_2$	$y_1$	$y_5$
0x50	$y_3$	$y_7$					
0x60							

300 ↘

*FIG. 34*

$x_0$	$x_4$	$x_6$	$x_2$	R1
$x_1$	$x_5$	$x_3$	$x_7$	R2
				R3
$y_0$	$y_1$	$y_2$	$y_3$	R4
$y_4$	$y_5$	$y_6$	$y_7$	R5

*FIG. 35*

└